What Is Claimed Is:

1. A magnetooptic device comprising:

a semiconductor laser which emits a laser beam from a laser beam output surface; and

a thin film magnetic transducer stacked on the semiconductor laser.

2. A magnetooptic device according to claim 1, wherein the thin film magnetic transducer comprises:

a magnetic circuit having a magnetic gap; and

a coil wound around a core as an element of the magnetic circuit.

3. A magnetooptic device according to claim 2, wherein the magnetic gap is formed in a laser beam output position in the laser beam output surface.

4. A magnetooptic device according to claim 2, wherein the magnetic gap has a length smaller than the spot diameter of the laser beam in the laser beam output surface.

5. A magnetooptic device according to claim 2, wherein the thin film magnetic transducer has plural magnetic gaps in the laser beam output surface.

6. A magnetooptic device according to claim 2, wherein the coil is wound around the core in a cylindrical shape.

7. A magnetooptic device according to claim 2, wherein the coil is wound around the core in a disk shape.

8. A magnetooptic device according to claim 2, wherein the semiconductor laser is an edge emitting semiconductor laser,

the magnetic gap is formed in the laser beam output surface of the edge emitting semiconductor laser, and

the coil is formed on an anode of the edge emitting semiconductor laser.

9. A magnetooptic device according to claim 2, wherein the semiconductor laser is an edge emitting semiconductor laser, and

the magnetic gap and the coil are formed in the laser beam output surface of the edge emitting semiconductor laser.

10. A magnetooptic device according to claim 2, wherein the semiconductor laser is a vertical cavity surface emitting semiconductor laser, and

the magnetic gap and the coil are formed in the laser beam output surface of the vertical cavity surface emitting semiconductor laser.

11. A magnetooptic device according to claim 1, wherein the thin film magnetic transducer has a coil formed in the laser beam output surface along an optical axis as a center.

12. A magnetooptic device according to claim 11, wherein the thin film magnetic transducer has a shading body which is disposed on the inside

of the coil and has an opening smaller than the spot diameter of the laser beam on the laser beam output surface in a laser beam output position of the laser beam output surface.

13. A magnetooptic device according to claim 12, wherein the shading body is made of a material having a high magnetic permeability.

14. A magnetooptic device according to claim 12, wherein the semiconductor laser is a vertical cavity surface emitting semiconductor laser, and

the shading body also serves as an electrode provided on the laser beam output surface side of the vertical cavity surface emitting semiconductor laser.

15. A magnetooptic device comprising:

a semiconductor laser which emits a laser beam from a laser beam output surface;

a shading body having an opening in a laser beam output position in the laser beam output surface; and

a thin film magnetic transducer which has a magnetic gap in the laser beam output surface and is stacked on the semiconductor laser.

16. A magnetooptic device according to claim 15, wherein the magnetic gap is formed in the laser beam output position in the laser beam output surface.

17. A magnetooptic device according to claim 15, wherein the

semiconductor laser is a vertical cavity surface emitting semiconductor laser, and

the shading body also serves as an electrode which is provided on the laser beam output surface side of the vertical cavity surface emitting semiconductor laser.

18. A magnetooptic device according to claim 15, wherein a length in a gap width direction of the opening is smaller than a gap width of the magnetic gap.

19. A magnetooptic device according to claim 15, wherein the opening is formed on the side of one of a pair of poles which are disposed so as to face each other over the magnetic gap.

20. A magnetooptic device according to claim 15, wherein the shading body has a small metal body having a size smaller than that of the opening within the opening.

21. A magnetooptic device according to claim 15, wherein the shading body is formed around a pair of poles which are disposed facing each other over the magnetic gap so that the shading body is flush with the pair of poles.

22. A magnetooptic device comprising:

a semiconductor laser which emits a laser beam from a laser beam output surface; and

a thin film magnetic transducer and a magnetoresistive sensor

which are stacked on the semiconductor laser.

23. A magnetooptic device according to claim 22, wherein the magnetoresistive sensor is stacked on the semiconductor laser via a thermal resistive film, and

the thin film magnetic transducer is stacked on the magnetoresistive sensor.

24. A magnetooptic device according to claim 22, wherein the thin film magnetic transducer is stacked on the semiconductor laser, and

the magnetoresistive sensor is stacked on the thin film magnetic transducer.

25. A magnetooptic head comprising:

a magnetooptic device having

a semiconductor laser which emits a laser beam from a laser beam output surface and

a thin film magnetic transducer which has a magnetic gap in the laser beam output surface and is stacked on the semiconductor laser; and

a flying slider which holds the magnetooptic device and flies in a predetermined direction relative to a recording medium over the recording medium.

26. A magnetooptic head according to claim 25, wherein the magnetic gap is formed perpendicular to the predetermined direction.

27. A magnetooptic head according to claim 25, wherein the

magnetic gap is formed parallel to the predetermined direction.

28. A magnetooptic head according to claim 25, wherein the opening is disposed nearer to the predetermined direction side than the magnetic gap.

29. A magnetooptic head comprising:

a magnetooptic device having

a semiconductor laser which emits a laser beam from a laser beam output surface and

a shading body having an opening in a laser beam output position in the laser beam output surface, and

a thin film magnetic transducer which has a magnetic gap in the laser beam output surface and is stacked on the semiconductor laser; and

a flying slider which holds the magnetooptic device and flies in a predetermined direction relative to a recording medium over the recording medium.

30. A magnetooptic head according to claim 29, wherein the magnetic gap is formed in parallel with the predetermined direction;

and the opening has a rectangular shape which is long in the predetermined direction and is disposed nearer to the predetermined direction side than the magnetic gap.

31. A magnetooptic head according to claim 29, wherein the magnetic gap is formed perpendicular to the predetermined direction, and

the opening has a rectangular shape which is long along the

predetermined direction and is disposed nearer to the predetermined direction side than the magnetic gap and is disposed nearer to one of a pair of poles which are arranged so as to face each other over the magnetic gap.

32. A magnetooptic head comprising:

a semiconductor laser which emits a laser beam;

a transparent condensing medium having an incident surface on which the laser beam from the semiconductor laser is incident and a light-receiving surface on which the laser beam incident on the incident surface is condensed to thereby form a beam spot; and

a thin film magnetic transducer including a magnetic circuit which is stacked on the light-receiving surface and has a magnetic gap, and a coil wound around a core as a component of the magnetic circuit.

33. A magnetooptic head according to claim 32, wherein the magnetic gap is formed in a forming position of the beam spot in the light-receiving surface.

34. A magnetooptic head according to claim 32, wherein the magnetic gap has a length smaller than the size of the beam spot.

35. A magnetooptic head according to claim 32, wherein the thin film magnetic transducer has plural magnetic gaps in the light-receiving surface.

36. A magnetooptic head according to claim 32, wherein the coil is wound in a cylindrical shape around the core.

37. A magnetooptic head according to claim 32, wherein the coil is wound in a disk shape around the core.

38. A magnetooptic head according to claim 32, wherein the transparent condensing medium is either a hemispherical solid immersion lens or a truncated spherical super solid immersion lens.

39. A magnetooptic head according to claim 32, wherein the transparent condensing medium has a reflecting surface by which the laser beam incident on the incident surface is reflected so as to form the beam spot on the light-receiving surface.

40. A magnetooptic head according to claim 39, wherein the reflection surface is constructed by a part of a paraboloid of revolution.

41. A magnetooptic head according to claim 39, wherein the reflecting surface is constructed by a flat plane and a reflection type hologram is provided on the surface of the flat plane.

42. A magnetooptic head according to claim 32, wherein the transparent condensing medium comprises a first transparent medium and a second transparent medium which have almost the same refractive index,

the first transparent medium has the incident surface,

the second transparent medium has the light-receiving surface and is a flying slider which flies over a recording medium.

43. A magnetooptic head comprising;

a semiconductor laser which emits a laser beam;

a transparent condensing medium having an incident surface on which the laser beam from the semiconductor laser is incident and a light-receiving surface on which the laser beam incident on the incident surface is condensed to thereby form a beam spot;

a shading body having an opening smaller than the beam spot in a position in which the beam spot is formed in the light-receiving surface; and

a thin film magnetic transducer which is stacked on the light-receiving surface and has a magnetic gap.

44. A magnetooptic head according to claim 43, wherein the magnetic gap is formed in a forming position of the beam spot in the light-receiving surface.

45. A magnetooptic head according to claim 43, wherein a length in a gap width direction of the opening is smaller than a width of the magnetic gap.

46. A magnetooptic head according to claim 43, wherein the opening is formed on the side of one of a pair of poles which are disposed so as to face each other over the magnetic gap.

47. A magnetooptic head according to claim 43, wherein the shading body has a small metal body having a size smaller than that of the opening within the opening.

48. A magnetooptic head comprising:

a magnetooptic device having a semiconductor laser which emits a laser beam from a laser beam output surface, a thin film magnetic transducer and a magnetoresistive sensor which are stacked on the semiconductor laser; and

a flying slider which holds the magnetooptic device and flies over a recording medium.

49. A magnetooptic head comprising:

a magnetooptic device including a semiconductor laser which emits a laser beam from a laser beam output surface, a shading body having an opening in a laser beam output position in the laser beam output surface, a thin film magnetic transducer which is stacked on the semiconductor laser and has a magnetic gap in the laser beam output surface, and a magnetoresistive sensor; and

a flying slider which holds the magnetooptic device and flies over a recording medium in a predetermined direction relative to the recording medium.

50. A magnetooptic head according to claim 48, wherein the magnetoresistive sensor is stacked on the semiconductor laser via a thermal resistive film, and

the thin film magnetic transducer is stacked on the magnetoresistive sensor.

51. A magnetooptic head according to claim 48, wherein the thin film magnetic transducer is stacked on the semiconductor laser, and

the magnetoresistive sensor is stacked on the thin film magnetic transducer.

52. A magnetic disk drive comprising:

a magnetooptic device having a semiconductor laser which emits a laser beam from a laser beam output surface and a thin film magnetic transducer which has a magnetic gap in the laser beam output surface and is stacked on the semiconductor laser;

a disk on which a recording medium is formed on the surface;

a flying slider which holds the magnetooptic device and flies over the recording medium; and

a moving unit which moves the flying slider relative to the disk.

53. A magnetic disk drive comprising:

a magnetooptic device having a semiconductor laser which emits a laser beam, a transparent condensing medium including an incident surface on which the laser beam from the semiconductor laser is incident and a light-receiving surface on which the laser beam incident on the incident surface is condensed so as to form a beam spot, and a thin film magnetic transducer which is stacked on the light-receiving surface and has a magnetic gap;

a disk on which a recording medium is formed on the surface;

a flying slider which holds the magnetooptic device and flies over the recording medium; and

a moving unit which moves the flying slider relative to the disk.

54. A magnetic disk drive according to claim 52, wherein the

semiconductor laser intermittently emits the laser beam at the time of recording information onto the recording medium.

55. A magnetic disk drive according to claim 52, wherein the semiconductor laser emits the laser beam continuously or intermittently at the time of reproducing information from the recording medium.